

## REMARKS

Claims 1-8, 14, 15, 22-25 and 31-34 are currently pending in this application. Claims 1 and 22 are independent.

### **Rejection Under 35 U.S.C. § 112, first paragraph**

Claims 22-25 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make or use the invention. In particular, the Office Action states that the phrase, "applying an etchant *in an inverse pattern* to said predetermined pattern..." is new matter. Applicant has amended claim 22 to delete "in an inverse pattern", thereby obviating the rejection.

In view of the above, it is respectfully requested that the rejection of claim 22-25 under 35 U.S.C. §112, first paragraph be withdrawn.

### **Rejection Under 35 U.S.C. § 103(a)**

Claims 1-3, 7 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,987,739 to Lake ("Lake") in view of U.S. Patent No. 6,501,059 to Mast ("Mast").

Lake discloses a polymer based circuit production method comprising the steps of: (1) treating a surface of a polymer substrate with ultraviolet radiation by directing the ultraviolet radiation in a region proximate the polymer substrate surface in the absence of a flow of ozone being supplied into the region the treatment resulting in an ultraviolet radiation treated polymer substrate surface for promoting adhesion of the surface to a coating material; (2) forming at least one circuit on the polymer substrate surface; and (3) applying the coating material to at least a portion of the ultraviolet radiation treated polymer substrate surface.

The present invention provides a method of producing a thin and flexible RF antenna tag or label which contains an RF circuit connected to an antenna which is created by demetallizing the area around the antenna pattern on a thin, metallized substrate such as a film or paper web. In particular, the demetallization process involves applying an etchant to the metallized substrate

using a conventional flexographic printing press. The method may also involve placing a holographic image on the metal of the antenna.

Independent claim 1 of the present invention recites a method for formation of a radio frequency antenna of a predetermined pattern on a surface of a substrate, comprising: (1) applying a metal layer to a surface area of the substrate, (2) applying an etchant to the predetermined pattern to the metal layer using a flexographic printing press and thereafter removing a portion of the metal layer comprising all metal within the surface area on the substrate other than metal in the predetermined pattern comprising the antenna, and (3) *placing a holographic image on the metal of the antenna. (emphasis added)*. Lake fails to disclose applying an etchant using a flexographic printing press. Moreover, Lake does not teach placing a holographic image on the metal of the antenna. The Office Action indicates that Lake teaches placing an optical structure 20 on the metal of the antenna. However, element 20 refers to a semiconductor die 20 that is "mounted, attached, formed, or deposited on the substrate 14". There is no indication by Lake that this element is placed on the metal of the antenna, as recited in independent claim 1. Additionally, Lake's semiconductor die 20 is not a holographic image, as required by claim 1. By contrast, the semiconductor die 20 is merely a component of a polymer-based integrated circuit that is mounted to the substrate 14 using an adhesive.

The Office Action attempts to cure the deficiencies of Lake by applying the teachings of Mast to show an etching process using a flexographic printing press. Mast is directed to a microwaveable laminate comprising: (1) a first layer that is transparent to microwave energy having an electrically insulating first surface; and (2) a second layer having a microwave-absorbing region of patterned electrically conducting film. The microwave-absorbing region comprises conductive portions and nonconductive portions, wherein a section of conductive portion between nonconductive portions is configured to break to inhibit arcing and damage to other regions of the patterned electrically conducting film if the section is exposed to excessive heat during use. Mast has nothing to do with the formation of an RF antenna, or placing a holographic image on the metal of the antenna, and therefore fails to cure the deficiencies of Lake. In particular, Mast does not disclose placing a holographic image on the metal of the antenna. As noted above, Mast is directed to a microwaveable laminate and has no relation to

the formation of an RF antenna or the placement of any type of structure on an antenna. In this regard, Mast makes no mention of a holographic, and therefore cannot provide a teaching for placing a holographic image on the metal of the antenna.

In view of the above, it is respectfully submitted that claims 1, 3, 7 and 8 are not rendered obvious by Lake in view of Mast.

Additionally, in order to rely upon a reference under 35 U.S.C. 103(a), the reference must be analogous prior art. In this regard, Mast is directed to a disparate field of endeavor than that of the present application (and Lake), and is therefore nonanalogous art that may not properly be relied upon in rejecting the claims of the invention. Referring to MPEP 2141.01(a), the examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). In *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993), the patent claims were directed to single in-line memory modules (SIMMs) for installation on a printed circuit motherboard for use in personal computers. The court held that reference to a SIMM for an industrial controller was not necessarily in the same field of endeavor as the claimed subject matter merely because it related to memories. The reference was found to be in a different field of endeavor because it involved memory circuits in which modules of varying sizes may be added or replaced, whereas the claimed invention involved compact modular memories. Furthermore, since memory modules of the claims at issue were intended for personal computers and used dynamic random-access-memories, whereas reference SIMM was developed for use in large industrial machine controllers and only taught the use of static random-access-memories or read-only-memories, the finding that the reference was nonanalogous was supported by substantial evidence.

In the instant case, the present invention is directed to a method of producing a thin and flexible RF antenna tag or label which contains an RF circuit connected to an antenna. By contrast, Mast is directed to a microwaveable laminate comprising a first layer that is transparent to microwave energy having an electrically insulating first surface, and a second layer having a microwave-absorbing region of patterned electrically conducting film. This reference is neither in the field of applicant's endeavor, nor reasonably pertinent to the particular problem with which the inventor was concerned. In particular, one of ordinary skill seeking to provide a flexible RF antenna tag or label which contains an RF circuit would not be reasonably expected or motivated to look to a microwaveable laminate. For these reasons, it is respectfully submitted that Mast is directed to a disparate field of endeavor than that of the present application, and is therefore nonanalogous art that may not properly be relied upon in rejecting the claims of the invention.

**Conclusion**

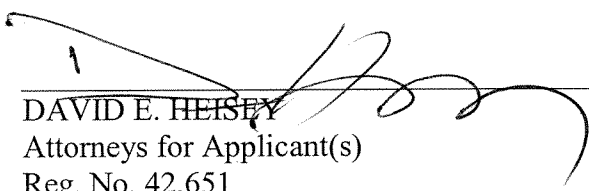
Applicant respectfully submits that claims 1-8, 14, 15, 22-25 and 31-34 are currently in condition for allowance. The Commissioner is hereby authorized to charge any fee required or refund any overpayment to our Deposit Account No. 19-1853 in the name of Sheppard, Mullin, Richter & Hampton. Should any issues remain unresolved, the Examiner is invited to telephone the undersigned.

Dated: October 9, 2006

Respectfully submitted,

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